



DEPARTMENT OF THE NAVY

NAVAL AIR SYSTEMS COMMAND
NAVAL AIR SYSTEMS COMMAND HEADQUARTERS
WASHINGTON, DC 20361-0001

IN REPLY REFER TO

NAVAIRINST 5100.3C
AIR-516C
10 Dec 92

NAVAIR INSTRUCTION 5100.3C

From: Commander, Naval Air Systems Command

Subj: NAVAL AVIATION SYSTEM SAFETY PROGRAM

- Ref:
- (a) Operating Agreement between the Commander, Naval Air Systems Command and the Naval Aviation Program Executive Officers
 - (b) DODINST 5000.2 of 23 Feb 91, Defense Acquisition Management Policies and Procedures
 - (c) SECNAVINST 5100.10G, Implementation of Department of the Navy Safety, Mishap Prevention and Occupational Health Programs
 - (d) OPNAVINST 5100.24A, Navy System Safety Program
 - (e) OPNAVINST 8023.2C, U. S. Navy Explosive Safety Policies, Requirements, and Procedures
 - (f) NAVSEAINST 8020.6C, Navy Weapon System Safety Program
 - (g) MIL-STD-882B, System Safety Program Requirements
 - (h) MIL-STD-1521B, Technical Reviews and Audits for Systems, Equipments, and Computer Software
 - (i) NAVSEAINST 8020.8, Department of Defense Explosive Hazard Classification Procedures
 - (j) MIL-STD-2105A (Navy), Hazard Assessment Tests for Navy Non-nuclear Ordnance
 - (k) DOD 4145.26-M of 1 Mar 86, DOD Contractors' Safety Manual for Ammunitions and Explosives
 - (l) OPNAVINST 8023.20E, Waivers of and Exemptions from Explosive Safety Requirements; Policies and Procedures for requesting
 - (m) NAVSEAINST 9310.1B, Naval Lithium Battery Safety Program
 - (n) SPAWARINST 5100.12A, Naval Laser Radiation Hazards Prevention Program
 - (o) SECNAVINST 12400.2A, Establishment of Department of the Navy Logistic Career Management Program
 - (p) NAVSEAINST 8020.5B, Qualification and Final (Type) Qualification Procedures for Navy Explosives (High Explosives, Propellants, and Pyrotechnics)
 - (q) OPNAVINST 8027.6D, Naval Responsibilities for Explosive Ordnance Disposal
 - (r) NAVSEA Ordnance Pamphlet 2165, Navy Transportation Safety Handbook for Hazardous Materials
 - (s) NAVSUP Pub 505, Preparation of Hazardous Materials for Military Air Shipment



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toxic, and other deleterious effects of explosives. Any equipment whose malfunction would hazard the safe handling, maintenance, storage, release, delivery, or firing of explosives is subjected to the requirements of this instruction.

b. WSESRB. The WSESRB executes the responsibilities outlined by the Chief of Naval Operations (CNO) in reference (e), and amplified in reference (f). The WSESRB is an independent authority on explosives safety, composed of representatives of the Navy systems commands under the chairmanship of the Director, Safety Office, Naval Sea Systems Command (SEA-665).

c. Naval Aviation Safety Review Panel. The Naval Aviation Safety Review Panel, chaired by the NAVAIR System Safety Coordinator (AIR-516C), ensures program compliance with explosives safety policy and requirements, including insensitive munitions requirements, prior to scheduling these programs for consideration by the WSESRB. The panel consists of the project engineer or manager, selected NAVAIRHQ branch heads, and field activity personnel to aid the panel activity.

d. NAVAIR System Safety Intern. The Navy Logistics Career Intern Program, established by reference (o) and managed by the NAVAIRHQ Logistics Resources Support Section (AIR-04A1C), annually allocates billets to AIR-516C for the development of career system safety engineers.

7. Responsibilities

a. AIR-516C is responsible for the Naval Aviation System Safety Program and will

(1) serve as the system safety authority for designers and program managers. Review and make recommendations concerning procurement documentation for new and modified equipment. Establish, implement, and monitor policies and requirements with respect to system safety (design safety) and weapon system explosives safety. Develop system and explosives safety specifications and requirements. Program and budget for system and explosives safety programs. Provide system safety and explosive safety inputs for the flight clearance process;

(2) provide direction concerning system safety policy and procedures to all field activities. Ensure that field activities maintain capability to provide system safety and explosives safety technical manpower and expertise;

(3) provide naval aviation system safety representation to DoD, CNO, tri-service, industry, and international committees. Establish and chair the internal Naval Aviation Safety Review Panel. Periodically review programs and field activity system safety activities. Act as the system level coordinator for aircraft crashworthiness disciplines;

(4) provide system safety training and professional development for safety personnel. Act as the support office for system safety interns in the Navy Logistics Career Intern Program.

b. PEO's, DRPM's, Assistant Commanders, Office and Division Directors, Program Managers, Assistant Program Managers, and Field Activity Project Managers (as applicable) will implement the following system safety engineering requirements for their respective programs while complying with policy established in paragraph 5 above:

(1) Develop system safety program requirements with AIR-516C before the next milestone.

(2) Ensure WSESRB requirements are met. Reference (f) provides detailed information. Ensure that WSESRB presentations are reviewed by the Naval Aviation Safety Review Panel before WSESRB reviews.

(3) Ensure that all development projects provide adequate funding, planning, and hardware items for safety, explosive qualification, and environmental evaluation tests. The requirements of references (i), (j), (m), (n), (p), and (q) must be evaluated when making development planning and budgeting decisions.

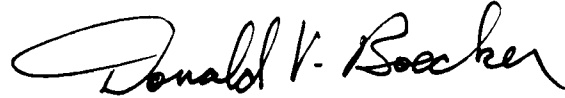
(4) Ensure that designated field activity or contractor engineers, assigned project engineering management responsibilities, are experienced with safety concepts, techniques, and current safety criteria and have authority and responsibility to ensure a complete safety program.

(5) Ensure that items containing explosive or energetic material are properly marked, handled, and shipped per reference (r). Ensure that safety requirements of reference (s) are followed for air shipment of explosive and dangerous materials.

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(6) Ensure that requests for waivers of, and exemption from explosive safety requirements, if required, are submitted following reference (1).



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Vice Commander

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1. Purpose. To establish policy and assign responsibilities for a formal system safety process by implementing the Naval Aviation System Safety Program within the Naval Air Systems Command (NAVAIR).

2. Cancellation. This instruction supersedes NAVAIR Instruction 5100.3B of 24 July 1981, and cancels NAVAIR Instruction 5100.7 of 24 April 1986. Since this is a major revision, changes are not indicated.

3. Scope. This instruction applies to programs for which NAVAIR provides system safety engineering support for systems, subsystems, equipments, and facilities, including modifications, which are developed, produced, tested, operated, or maintained by or for naval aviation programs. This instruction establishes minimum system safety program requirements for all Acquisition Category (ACAT) programs controlled by NAVAIR, and those controlled by naval aviation Program Executive Offices (PEO's) and Direct Reporting Program Managers (DPRM's) to which NAVAIR provides system safety engineering support per reference (a).

4. Background. The Department of Defense (DoD) and the Department of the Navy have directed significant attention to early recognition of hazards and their elimination or control. References (b), (c), and (d) emphasize this goal through system safety engineering and management. References (e) and (f) require explosive ordnance safety responsibilities to be clearly defined. Reference (f) also establishes policies, requirements, and procedures concerning the Weapon System Explosive Safety Review Board (WSESRB). Reference (g) establishes requirements for developing and implementing system safety programs for DoD systems and facilities through all phases of the system life cycle.

5. Policy

a. A formal system safety program will be established and continued for each naval aviation acquisition program. System safety management and engineering requirements will be applied to other programs as deemed necessary by the manager charged with execution. Other programs include military construction projects, system maintenance programs, logistics, training, operations, and research and development projects.

b. Risks and benefits identified by the system safety program will be evaluated against resources and operational requirements so that maximum risk reduction can be achieved.

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c. Hazards which could result in death or injury to personnel, or in material loss or damage, will be identified early and eliminated or controlled to an acceptable level of risk prior to system production and initial operating capability.

d. Contractual requirements for ACAT I and II programs will be developed per reference (d) and applied to ACAT III and IV programs when the appropriate program manager deems it necessary.

e. System safety will be reviewed during technical reviews of acquisition programs per reference (h).

f. Conventional ordnance systems will comply with references (i) and (j). Conventional explosive materials and subsystems of nuclear weapons will comply with the system safety and explosive safety requirements of this instruction.

g. Procurement requests and contracts involving explosive materials will reference DoD Federal Acquisition Regulations Supplement 52.228-7007, which requires contractors to meet the requirements of reference (k) when using explosives.

h. Appropriate occupational, safety, and health standards will be applied to the acquisition and life cycle of naval aviation systems, equipment, and facilities as recommended by the Naval Air Systems Command Headquarters (NAVAIRHQ) Occupational Safety and Health Program Manager (AIR-09F2).

i. Requests for waivers of and exemption from explosives safety procedures, storage, handling or quantity distance requirements will be submitted per reference (l).

j. Lithium battery safety approval will be obtained per reference (m), in coordination with NAVAIRHQ Electrical Power Section (AIR-53632).

k. Laser radiation hazards will be identified and controlled by reference (n), in coordination with the Space and Naval Warfare Systems Command (Code 00F).

6. Definitions

a. Explosives Safety. Explosives safety activity is concerned with preventing premature or unintentional initiation of explosives or high-energy material, and control of chemical,